

# Imaginaries of a laparoscope: power, convenience, and sterilization in rural India

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## Imagineries of a laparoscope: power, convenience, and sterilization in rural India

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### ABSTRACT

Laparoscopic tubal ligation is the most prevalent method of contraception amongst India's rural and urban poor. Drawing on 18 months of ethnographic fieldwork in rural Rajasthan in 2012–2013, this paper investigates how rural women's perceptions of a biomedical instrument—the laparoscope—influence their perceptions of sterilization, a procedure often entrenched in coercive, target- and incentive-driven population control programme. By investigating how a laparoscope is entangled in global exchanges, national policies, institutional arrangements, and local moral worlds, this paper demonstrates that while wider biomedical discourses perpetuate the narrative of safety and convenience, people's everyday lives inform their understandings of technology that is widely known but rarely seen.

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## Introduction

I sit down with Jaya and Vijay, a couple in their seventies, in their shop on the main street in a village in Rajasthan, India. While interrupting each other to add details to the unfolding narrative, they tell me about the births of their four children and their loss of two within days of birth. This was the time of Indira Gandhi, Jaya says, so ending childbearing was not *her* problem to resolve. Vijay interrupts: one day during Jaya's last pregnancy during the National Emergency [1975–1977], he, in his early thirties, went to the mill to grind some wheat and was seized by men who dragged him to the sterilization camp and conducted *nasbandi*, a vasectomy. Jaya intervenes to emphasise that they grabbed him and performed *nasbandi* against his will, *jabardasti*. 'And they also cut the blood vein, so blood started pouring. We had to take him to a big hospital, where big doctors came to see him', she says. Vijay repeats that the doctor has brought him back to life and somewhat dismissively adds: 'It was a different time. Now it is different. Now it happens with a *doorbeen* [laparoscope], and before they used to cut it with a blade [in English]. Now it happens by choice'.

Vijay juxtaposes the blade and the laparoscope as two opposing times, not only techniques. The blade represents the failures of manual techniques and violent population control measures, which culminated during the Emergency in the mid-1970s. The images of blood pouring after a poorly performed vasectomy after being dragged to the sterilization

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camp illustrates the blade's capacity to harm. The gravity of complications is demonstrated by the need to be taken to a 'big hospital' with 'big doctors', something rarely accessible to rural populations. In contrast, the laparoscope represents the discourse of choice and the promise held by technology. It stands as a modern, scientific artefact that assumes its meaning only through being opposite to the blade: it represents choice, not force; sterility, not blood; skill, not incompetence.

Laparoscopy, also known as keyhole or minimally invasive surgery, is a surgical procedure that provides access to the abdomen and pelvis through a small incision in the abdomen. A laparoscope is a technology that is well-known to people in villages across India: it is used for tubal ligation (female sterilization), a contraceptive method that 96.8 percent of women know about and 36 percent of currently married women use (IIPS and ICF 2017a, 111, 119). The laparoscope transformed the way that the Indian state and biomedical infrastructure access rural women's bodies and reconfigured their everyday lives and social relations. The knowledge of the laparoscope and its workings proliferated throughout decades of population control programmes and reached often remote rural communities. One report describes nomadic pastoralist women in Rajasthan 'feeling excited' about the procedure because it takes 'only a prick to get sterilized' and allows to 'walk back home within an hour of the surgery without any entailing restrictions' even though nobody in the community has reported having the laparoscopic procedure (P. Sharma 2013, 224). Good's (2007, 364) concept of 'medical imaginary'—ways in which 'affective and imaginative dimensions of biomedicine and biotechnology envelop physicians, patients, and the public'—is helpful in understanding how a rarely seen biomedical artefact becomes ubiquitous in people's lives and imaginations.

Rural women's reported 'excitement' stands in contrast to the population control programmes that are often described as a form of violence against marginalised women perpetrated by the Indian state in the name of economic development (K. Wilson 2018). Since India's independence, increasingly coercive population control measures have attempted to tackle what various actors conceptualised as a key obstacle to India's economic development: its (over)population (Connelly 2006). Instead of addressing poverty as a matter of unequal distribution of resources and opportunities created by colonial misrule, the narrative of problematic population(s) offered a technocratic solution (Hodges 2004). However, fertility and its management are situated within the conditions of social and political inequalities (Greenhalgh 1995) and often reproduce hierarchies based on caste, class, gender, and geography. Since its inception, India's family planning agenda relied on neo-Malthusian assumptions despite the growing evidence documenting their detrimental consequences to people's lives (Rao 2004). Indian government continuously attempted to disavow a population control discourse and emphasise the narrative of choice, illustrated through the abandonment of targets in 1996 and an attempted conceptual shift from population control to reproductive health. However, neo-Malthusian logics continue guiding policy and action (Hartmann and Rao 2015).

The laparoscope encapsulates social hierarchies and relationships, but structural inequalities are not unambiguously embodied 'in tangible things like stainless steel probes and spring-loaded plastic clips' (Olszynko-Gryn 2014, 164). Precisely because reproductive technologies are neither inherently oppressive nor liberating (Schoen 2005), they gain meanings in social contexts and absorb people's desires of what technology, ending childbearing, or encountering institutions should be like. While the laparoscope may represent scientific

rationality, it is the socio-historical context within which it emerges that makes tubal ligation an acceptable form of medicalisation to some rural women.

Assisted reproductive technologies have received significant attention from anthropologists but remain focussed on sections of society which can afford expensive interventions (Bharadwaj 2016; Qadeer 2010). Technologies of sterilization that are encountered by significant sections of urban and rural populations have received surprisingly little attention (Olszynko-Gryn 2014). A technology that transformed surgery (Périsat 1999) is central to the population control programme that historically targets marginalised groups and reproduces social hierarchies. Understanding how relations of global exchange, national policies, institutional arrangements, and local moral worlds envelope the laparoscope is key to comprehending contemporary reproductive realities in rural India.

Many scholars demonstrate that women engage with reproductive technologies in pragmatic ways (Desai 2016; Gupta 2010; Lock and Kaufert 1998; Unnithan-Kumar 2010; Van Hollen 2007). Thinking about convenience as an aspect of people's everyday lives (Oka 2021) moves the conversation on pragmatic action further. While convenience as an anthropological lens is used within economic anthropology and is preoccupied with people's perceptions of efficiency and ease of use (Oka 2021), the concept can be applied to fields outside economics. Despite harsh living conditions in refugee camps, for instance, 'convenience was something [people] sought in their material and social environments and was seen as a normal part of human life' (Oka et al. 2019; cf Oka 2021). The concept can enrich conversations in medical anthropology by focusing on people's attempts to find convenient solutions to emerging contingencies in conditions of structural disenfranchisement as well as structural abundance. By focusing on the technical-sounding terms from economics and product design—ease of use and effectiveness—the concept of convenience seems to lack a moral dimension. What constitutes convenient options in different contexts, how this convenience is constituted, what meanings it comes to possess, and what moral and political issues get obscured by the concept remain open to ethnographic exploration.

While women underwent sterilization as a form of pragmatic action in India and elsewhere (Brault et al. 2016; López 2008), I demonstrate that laparoscope's imaginaries further contribute to our understanding of how women who are targeted by India's population control policies see sterilization not as a form of violence, but as a form of care (Lukšaitė 2022b). The polyvocal framework of care—care as everyday practices (Mol, Moser, and Pols 2010) that provide the concrete work of maintenance of our worlds (Puig de la Bellacasa 2017) while being situated within local moral worlds (Cook and Trundle 2020)—provides space for socially and institutionally situated ambivalent narratives about reproduction. The laparoscope in global north contexts is often praised as revolutionary for its short postoperative recovery times, reduced scarring, and general convenience (Périsat 1999). Medical imaginaries focussing on the convenience that this technology promises to patients and physicians have been seen as a positive and valued development within 'the political economy of hope' often surrounding healthcare systems in the global north (Good 2007). The same arguments about convenience have been described as serving the interests of the often incentive- and target-driven population control programme (Olszynko-Gryn 2014), especially within the public healthcare system characterised as dysfunctional and lacking resources and commitment (Banerjee, Deaton, and Duflo 2004).

In this paper, I demonstrate that while wider biomedical discourses focus on the laparoscope's convenience, women often refuse these arguments and highlight the ambiguous

power that the laparoscope possesses. It is not surprising that Vijay's view of the laparoscope as safe, sophisticated, and convenient corresponds with the biomedical view of this technology and the way this view is employed by the Indian state. The historical injury located within the male body and left by the Emergency enables the simplistic view of convenience to subsume all other concerns. Convenience, often accompanied by the promise of safety delivered by technology, legitimises the shift of contraceptive burden onto women's bodies. Rural women, however, often resist this simplistic understanding and draw on their everyday lives to develop an understanding of how this technology works. Women subvert biomedical discourses without refusing sterilization. I begin by describing the social worlds within which the laparoscope operates and then move to the ways in which the laparoscope is imagined in the village.

### Location, methods, and ethics

I draw on 18 months of ethnographic fieldwork in Jhadol subdistrict, Udaipur district, Rajasthan, India. Jhadol is predominantly inhabited by Adivasis (indigenous people), who have been historically marginalised in political, economic, and cultural realms by caste Hindus and the postcolonial state. Processes of marginalisation collide with chronic poverty, poor health, and poor healthcare infrastructure that characterise the area alongside low literacy rates, reliance on subsistence economy and cash from irregular, poorly paid manual labour, and high fertility rates.

During ethnographic fieldwork conducted between February 2012 and August 2013, I lived in Chandpur (pseudonym), a mixed-caste village, and participated in all aspects of village life whenever I was welcome. I built long-term trust-based relations with people in my fieldsite and seven families became my key interlocutor families. While I got to know many aspects of rural daily lives, I focussed on women's reproductive experiences and their entanglements with livelihoods, social and kin relations, and institutions. Besides village ethnography, I spent many hours in institutional healthcare settings. Besides regular visits to the Primary Health Centre and *anganwadis* (pre-school centres), I attended weekly sterilization camps held in two Community Health Centres (CHC) in two nearby towns. Sterilization camps were organised by Marie Stopes India (MSI), a subsidiary of Marie Stopes International (renamed MSI Reproductive Choices in 2020). During the camps, I observed encounters amongst women who came for sterilization, MSI clinical and organisational team, community health workers (CHWs), and the Chief Medical and Health Office (CMHO) bureaucrats. I built relationships with camp personnel whom I met regularly, while women attended the camps once and I built only short-term rapport. My position as an outsider and as a white woman mediated my interactions with my interlocutors in a multitude of ways. Building long-term trust in the village and short-term rapport in the camps relied on breaking down embodied hierarchies at every encounter, staying keen to hear everyone's perspectives, and an ability to communicate in a mixture of Mewari and Hindi. While residents of Chandpur and camp personnel got used to my presence over a prolonged period of fieldwork, my positionality in already power-infused contexts of the camp had effects I could not avoid. I remained continuously reflexive of how my presence may alter patients' experiences and attempted to document the practice in an unintrusive way. I took detailed fieldnotes during and after observations and interviews.

Some of the interviews and interactions were recorded with a verbal permission of everyone involved.

The permission to conduct observations in the camps was granted by Udaipur district and Jhadol tehsil's CMHOs and the MSI team. Biomedical personnel provided me access through their explicit invitations and permissions to observe registration, counselling, and most medical examinations, except surgery. After gaining formal access, I sought permissions from patients at every encounter. Building on my readings and reflections on power, ethics, and positionality in hospital ethnography and the developing understanding of social and cultural norms of the area which I gained through ethnographic enquiry undertaken before entering sterilization camps, I used my discretion of when to stay/leave, where to position myself within the room, and acted on my sensibilities of how my presence affected women's experiences.

## Historical context

India was the first country to introduce a national family planning policy in the early 1950s and found itself at the centre of the consolidation of a narrative that there is an unquestionable link between population and economy which necessitates interventions into people's reproductive lives (Sreenivas 2021). While eugenic narratives justify preoccupation with fertility control by focussing on how uncontrolled population growth produces undesirable consequences for the composition of nations and empires, neo-Malthusianism focuses on how overpopulation threatens economic development and causes poverty. In India, these two discourses often blended together 'blurring the line between economic and biological arguments for reducing population growth' (Bashford and Levine 2010, 101). The discourse that 'overpopulation' impeded India's economic prosperity was consolidated in the mid-twentieth century (Hodges 2004, 1159) but this discourse can be traced back to colonial rule and colonial Malthusianism (Sreenivas 2021).

India's population control programme started by advocating a rhythm method (Ledbetter 1984) and a cafeteria approach—the provision of various contraceptive methods, including condoms, pills, diaphragms, jelly, cream, foam tablets, IUDs, and sterilization—but it soon introduced targets, incentives (Satia and Maru 1986), and the camp approach (Krishnakumar 1974). Progressively coercive policies tackling 'overpopulation' were recommended by the World Bank, the Ford Foundation, the Population Council, and other international agencies (Connelly 2006).

In 1975, India's Prime Minister Indira Gandhi proclaimed a state of Emergency which lasted 21 months and witnessed postponement of elections, suspension of civil and political rights, and imprisonment of opposition figures. In the name of economic development, family planning became a priority of public policy. As demonstrated by Vijay's narrative in the opening vignette, Emergency continues to be remembered as '*nasbandi ka vaqt*' (a time of vasectomies) (Tarlo 2003). Forced sterilizations were performed on a reported eight million people, mostly illiterate, economically and politically marginalised men. Access to housing and water pumps, travel on public transport, keeping jobs, and passing exams were conditioned on the presentation of sterilization certificates that were obtained by getting sterilized or 'motivating' others to do so (Gwatkin 1979; Tarlo 2003).

In the context of ongoing trauma that marked the male body during the Emergency, development of laparoscopic surgery techniques reshaped gender regimes inherent in population control efforts (Bray 2007). The focus shifted to women as unquestionable targets of family planning. Laparoscopic tubal ligation became one of the most prevalent methods of contraception in the 1980s. The increasing reliance on laparoscopic sterilizations was situated within the continuing 'pressure to meet quotas, the obsession with efficiency, and the urgency to defuse India's population bomb' (Olszynko-Gryn 2014, 164). While the official targets were abandoned in 1996 and the rhetoric on reproductive health and rights proliferated, women remained the focus of family planning efforts as reproductive rights discourses continued advocating that reducing fertility would solve poverty (Qadeer 1998).

Around the time of fieldwork, 43 percent of rural married Rajasthani women underwent tubal ligation (IIPS and ICF 2017a). In 2014, 15 women died after undergoing tubal ligation in a camp in Chhattisgarh. The Supreme Court ordered the government to shut down sterilization camps within three years but journalists report that sterilization camps continue being held throughout India (Agrawal 2017; Ghosh 2021). Even though vasectomy is a less invasive, more efficacious, and more cost-effective procedure with less complications than tubal ligation (Shih, Turok, and Parker 2011), historical trauma of the Emergency meant that vasectomy is not seen as an acceptable option by the majority of India's population and constitutes only 0.2 percent of contraceptive use in 2019–21 (IIPS n.d.).

### Technological and institutional context

Tubal ligation is a surgical procedure during which a surgeon cuts, blocks, or ties uterine tubes to prevent eggs from reaching the uterus. It is a permanent and difficult-to-reverse method of contraception. While other tubal ligation methods do exist (Patil and Jensen 2015), tubectomy and laparoscopic tubal ligation are the most common techniques used in the public healthcare sector in India.

There are major differences in how these procedures are performed, their failure rates, and how people without medical education understand them. Tubectomy, or open surgery, is usually performed in a hospital and rarely in camps. A woman is put under general anaesthesia, and a surgeon makes two small incisions to gain access to the uterine tubes. The tubes are cut and different techniques, such as surgical ligation, electrocautery, clips and rings, and sometimes chemical tissue adhesives, might be used to prevent them from reconnecting (Wilson 1996). This procedure can be performed between 24 hours and 7 days postpartum, alongside a surgical abortion, or after a medical abortion.<sup>1</sup>

Laparoscopic sterilization is the procedure usually performed at sterilization camps and is a simpler procedure. A woman is given local anaesthesia and an incision is made in her belly button. Her abdomen is filled with carbon dioxide which elevates the abdominal wall above the internal organs to create a working and viewing space. A surgeon inserts a laparoscope, places plastic rings on both uterine tubes (other methods of occlusion can also be performed) and applies one stitch on the incision. Laparoscopic sterilization is performed at least 1.5 month after birth or an abortion. It has higher failure rates, compared to tubectomy, because the ring might be placed on something other than a uterine tube in an area populated with structures that can be mistaken for a uterine tube (R. Varma and Gupta 2004). Laparoscopic sterilization has been widely adopted across the world due to shorter operating times, improved ligation techniques, and advances in ambulatory surgery (Chang

et al. 2011). It is considered to be highly effective and generally safe as complications are rare (Patil and Jensen 2015) but quality of care in resource-poor healthcare infrastructure remains a significant concern.

Laparoscopic procedures, instruments, and skills are part of global networks of technological and scientific exchange. The introduction and popularisation of laparoscopy in various fields of surgery have been seen as revolutionary: within 40 years the surgical community in the US moved from the performance of the first laparoscopic tubal ligation by electrocoagulation in 1936 to performing 60 percent of tubal ligations laparoscopically in 1976 (Kaiser and Corman 2001; Nezhat 2003). Funded by international agencies, laparoscopic tubal ligation tools and techniques were exported from US to India in the 1970s by population control enthusiasts, individual surgeons, development agencies, private companies, and academic institutions (Olszynko-Gryn 2014). Population control advocates and funders portrayed tubal ligation as a ‘technological fix’ for the problem of ‘population bomb’ in India (Olszynko-Gryn 2014). A laparoscopic tubal ligation was meant to provide a solution to poverty without the need of addressing the distribution of resources, access to quality healthcare, and lack of social security systems.

Tubal ligation remains the most prevalent method of contraception, especially among the rural and urban poor. In 2015–16 in India, 36 percent of married women aged 15–49 used tubal ligation. Half of the women underwent sterilization before the age of 26 (the median age at first marriage in India is 19). 95 percent of sterilized women have at least two living children and almost 50 percent have at least three (IIPS and ICF 2017a, 128). 35 percent of sterilization procedures in rural Rajasthan are conducted in camps (IIPS and ICF 2017b, 63), a common term describing a temporary service provision facility, mostly for rural populations lacking access to services. Camps are often held to tackle well-defined issues: eye camps, IUD camps, immunisation camps, pension camps, blood donation camps and, more recently, COVID-19 vaccination camps are held across India. Poor quality of care in sterilization camps has been an ongoing concern (Ramanathan, Dilip, and Padmadas 1995; Bali, Yadav, and Alok 2020), especially in the context of deaths of 15 women after undergoing sterilization in a camp in Chhattisgarh in 2014 (D. C. Sharma 2014). The subsequent Supreme Court judgement argued that 363 women died between 2010–13 during or after surgery in sterilization camps and ordered the government to shut them down within three years (*Devika Biswas v. Union of India* 2016).

Between September and April—‘a sterilization season’—camps were held every Tuesday and Friday in two towns in Jhadol which hosted CHCs. The Rajasthan government outsourced the organization of sterilization camps in some subdistricts of Udaipur, such as in Jhadol, to MSI, a subsidiary of Marie Stopes International—a private not-for-profit social enterprise delivering contraception and safe abortion services worldwide. Such outsourcing illustrates a longstanding involvement of international organisations and funding bodies in financing population control measures in India (Connelly 2006) which also produce new institutional forms of governance relying on market-driven relations between government and non-government actors—forms neoliberal governmentality takes in rural India (Sharma 2006). MSI workers and the CMHO bureaucrats set up the camp on the morning of the designated day while MSI clinical team travelled from Udaipur, the nearest city, in a van bringing surgical equipment required to perform laparoscopic tubal ligations in rural facilities. Women from surrounding villages arrived for the procedure accompanied by CHWs who had ‘motivated’ them for sterilization. Visitors from MSI headquarters in Delhi and



an office in Jaipur often observed the camps to collect data and report on standards of care at this facility and, in so doing, constructed the population control programme's legitimacy and transparency at the local level (Luksaite 2016).

### Laparoscopic relations

Throughout fieldwork, the sterilization camp's operating room (OR) was largely out-of-bounds for me, and I remained on the other side of the door alongside patients, CHWs, and bureaucrats overseeing the process. The surgeon constructed the OR as an extraordinary space removed from the everyday life of the hospital within which it was located (Moreira 2004). I entered the OR only once, a month before the end of fieldwork, when a new surgeon took the role and redefined my—ethnographer's—access. The surgeon who operated in the camp before this change had defined my role as an outsider to the OR when she learnt I was not a medical student. She welcomed me to observe the camp with an explicit prohibition of entering the OR, a space I had no intention of observing. Six months into visiting weekly camps—something that surprised the camp staff accustomed to one-time observers—the surgeon started suggesting that she would allow me into the OR soon, portraying it as a prize. After she resigned, new surgeon's ideas about the OR's sanctity/separation were different but he also assumed that I would want to enter inside. Both surgeons constructed the OR as a desirable place. He instructed the staff to give me a surgical mask, a cap, and shoe covers, and invited me to observe the procedure. I did not refuse his invitation and complied with instructions. Although I never intended to visit the OR, I found myself hesitantly accepting access given to me by a person in power.

Nervously standing in the corner, I observed how a woman was led inside and lifted by a male nurse onto the operating table. She was given anaesthesia, and another nurse made a small incision in her belly button. The woman moaned when her abdomen was inflated with carbon dioxide and a laparoscope was inserted. The surgeon navigated the instrument for a few seconds and called me over to look at the magnifying lens on top of the instrument. I was aware that while the surgeon has given me permission, the patient has not given her explicit consent to have me in the room. Obtaining patients' consent for the presence of observers in ORs has been discussed as a desirable but rarely implemented ethical practice in biomedical settings (Leung and Patil 2011). I apprehensively moved across the OR and stood next to the operating table. I looked through the lens on top of the laparoscope and saw a white plastic ring clipped on the pink flesh, a uterine tube. I gave the surgeon a sign that I have seen enough and returned to the corner. He removed the instrument, inserted a second ring into it, returned the instrument to the incision and, a few seconds later, removed it. The nurse put a single stitch onto the incision and placed a bandage across the abdomen. The male nurse lifted the woman from the operating table, seated her into a narrow rolling chair, and pushed her out of the OR. I left behind them.

The surgical mask, placed between the pages of my fieldnotes, still reminds me of this uncomfortable scene. The intimacy of the encounter and the guarded space with specialised rules and equipment contributed to the discomfort I felt: an anthropologist inside this extraordinary space gazing inside the woman's body. Pillow (2003) invites scholars to move from confessional reflexivity to 'reflexivities of discomfort' highlighting the importance of thinking about boundaries, insider/outsider relations, and the power to cross them during fieldwork. While attempting to be a compassionate, ethical, and reflexive ethnographer, my

presence and ability to cross boundaries—into the OR, between examination rooms, in-and-out-of biomedical/bureaucratic/patient circles—is an articulation of power marking me as a researcher. Discomfort informs me of the difficulties of understanding the perspectives of patients without such power.

Even though the laparoscope did not cross the boundary between the guarded biomedical world in the OR and the life outside—particularly because women were under anaesthesia when they were subjected to its workings—laparoscope's effects and imaginaries entered women's conversations on mattresses outside the OR and extended into their villages. Women's encounters with various workers in the camp involved the discussion about the laparoscope and how it works.

Gunjan, MSI's interpersonal communicator and a key worker in the camp, is involved in the registration process and liaising between rural women, CHWs, bureaucrats, and the surgical team. A dominant-caste married woman in her thirties, Gunjan resides in a big town in the district and is part of an emergent middle class, defined by aspirations rather than achievements of consumption, ideology, or income (Ortegren 2019). Gunjan's job is to register women when they arrive from villages and conduct pregnancy tests. She gives them plastic pots and directs them to a single working toilet to urinate in the pot. After women return, Gunjan unpacks a pregnancy stick and dips it inside the urine. She puts the stick on the edge of the table, on the plastic packaging that the test was wrapped in, the wet edge hanging off the edge of the table. Negative, she says most often and writes it on the paperwork (Lukšaitė 2022a).

One day when a visitor from MSI headquarters in Delhi is expected to observe the camp—this happens often to ensure transparency of a programme haunted by forced vasectomies during the Emergency (Tarlo 2003; Williams 2014)—Gunjan conducts a rare counselling session. She invites three Adivasi women into the meeting hall and asks them to sit around her. Similar to other counselling sessions that I observed, Gunjan explains that the operation would only take five minutes, that it would not hurt, that women only need to sleep for an hour after the procedure, and that the operation would leave only a small scar. Gunjan tells women with infants in their laps that they would have one stitch after the procedure and demonstrates on her own belly button after lifting the side of her sari. She says that this is a permanent procedure and that they would not be able to have more children afterwards. The way MSI, biomedical, and state personnel speak about the operation amongst themselves and with rural women corresponds with the biomedical discourse of convenience. The camp staff emphasise that laparoscopic operation is safe, quick, painless, and bloodless, and focus on the procedure's convenience for the patient: shorter recovery time is meant to allow women to return to their caregiving responsibilities at home, low risk of complications means that women do not need to rely on the under-resourced health-care infrastructure for post-operative care, and the lack of disfiguring abdominal scar means that there is no reminder of the procedure. Biomedical arguments provided in the camp and in the literature align with Vijay's narrative in the opening vignette: the laparoscope promises surgery without blood, complications, or even a scar.

'Operation can sometimes fail', Gunjan says. The operation would only fail, however, if women do not rest for one month after the operation and if they do not care for themselves. She explains that during the laparoscopic operation, a plastic ring is placed on their uterine tubes. Failing to rest and care for themselves would make the ring slip. The meaning of resting and care remains ambiguous until Gunjan explains that the operation could fail if

these women's husbands do not *care* for them. She says the plastic ring can slip during sex 'because of pushing'. That is why Gunjan alongside CHWs advises women not to have sex at least 21 days after the procedure. 'But longer would be better', she says. 'Women become weaker because of sex, so it is good not to have it after operation also.'

During one of the camps, MSI staff announce that there were 14 cases of failed operations—defined as pregnancy occurring after sterilization—in Jhadol in the last three years. One of the reasons for the laparoscopic tubal ligation's failure is the possibility that the ring has been placed on something other than a uterine tube: in the abdominal area where the uterine tubes are located, there are other similar structures and tissues that can be mistaken for a uterine tube (R. Varma and Gupta 2004). There have been numerous legal cases and several judicial decisions from courts across India concerning the failure of a sterilization procedure which acknowledged women as victims of medical negligence (State of Haryana & Ors vs. Smt. Santra 2000). Nevertheless, Gunjan's narrative removes the responsibility for sterilization's failure from the biomedical personnel, skills, equipment, and quality of care. She places the responsibility for the failure of the most desired aspect of the operation—its permanency—on women, their partners, and women's inability to negotiate conditions of their sexual encounters. She places the power to wound (Nguyen and Peschard 2003) within the intimacy of the couple instead of within the political economy of population control. In Gunjan's view, surgical skill and biomedical technology emerge as incapable of failure. Like Vijay's narrative in the opening vignette, the laparoscopic procedure emerges as representing scientific rationality that is juxtaposed, here, to the unruly rural bodies—dangerously unrestrained and always ready to fail (Bridges 2008)—and their sexual relations.

### Laparoscope's power and ambivalence

While wider biomedical discourses focus on the laparoscope's convenience, women often resist this simplistic understanding and draw on their everyday lives to develop an understanding of how this technology works. The way that the laparoscope enters everyday conversations of rural Rajasthani women—what it is, how it works, and whether it is better than open surgery—uncovers women's relationships with population control efforts, the fascination with technology, and power exercised by state and biomedical institutions. The relationship between women and laparoscopes encapsulates the reasons why tubal ligation is seen by some people as a technologically sophisticated option that is implemented by 'choice', as discussed in the opening narrative, in contrast to the widespread concerns about quality of care and numerous women's deaths in sterilizations camps (D. C. Sharma 2014) in a population control programme often described as a form of violence against women (K. Wilson 2018).

Across India, tubal ligation is referred to as *operation*. Women in my fieldsite often specify what type of operation they have had: open surgery or a laparoscopic operation. They refer to open surgery as a big operation or an operation with stitches (*taakewalla*). They refer to a laparoscopic operation as an electric (*karantwalla*) or a telescopic (*doorbeenwalla*) operation. These local terms reveal local conceptualisations of the procedure and how it fits within wider processes and institutions.

*Karantwalla* operation, or the electric operation, refers to the electricity that enters and potentially transforms one's body during the procedure. *Karant* is one of the Hindi words to refer to electricity: it is derived from 'current', an outdated word for electricity. *Karant* is

especially used in contexts when one is electrocuted—physically or poetically (Ahearn 2003, 109)—thus denoting both electricity and the *karantwalla* operation as dangerous. In the context of India-controlled Kashmir, Varma (2020, 114–43) discusses *karant*, or electric shock, as a form of ambivalently located care in humanitarian and military contexts: as electroconvulsive therapy treatment for depression and as a form of torture aimed at keeping the nation-state safe.

*Karant* describing laparoscopic procedure, too, is ambivalent. People often explain the *karantwalla* operation by pointing at the ceiling fan, if there is one, to illustrate the working of electricity. Electricity pervades people's everyday lives and imaginations (Abram, Winthereik, and Yarrow 2019). In rural India, it is particularly visible through the working of fans, something common in brick buildings and uncommon in mud houses. The fans stopping and starting mark the beginnings and endings of daily blackouts which occur due to irregular supply. Electricity is also felt physically: commonly poor insulation often leads to minor electric shocks. Some consider that the laparoscope's electricity burns uterine tubes or that it 'pulls' or 'sucks' the blood from the body. Some women see the operation as causing weakness: a vernacular form of gendered chronicity found across South Asia articulating the embodiment of social, economic, and political inequalities (Rashid 2007; Simpson 2022; S. Varma 2020). One woman told me when pointing at the fan: 'The way the water is sucked up the pipe, that is how the blood is sucked out with the *doorbeen*. Would you not become weak after it?' This conceptualisation renders wider conditions causing fatigue and anaemia—poor nutrition, gender inequalities in the distribution of food within the household, agricultural cycles and shortages, and broader socio-economic restraints in access to food—insignificant. The biomedical instrument emerges as a technology capable of causing harm and contributing to the wider experiences of chronicity. Biomedical and state personnel often try to counter these ideas with biomedical explanations emphasising that the procedure is painless and bloodless, does not require post-operative rest, and does not cause weakness.

People say that electricity during the laparoscopic procedure creates heat within the body which affects the body similarly to being electrocuted. The heat within the body is not necessarily feared but it needs to be balanced by cooling factors: cold substances or cold weather. If performed during the hot season, the heat from the operation may combine with hot weather which slows down the healing and increases the risk of infection. That is why most women get their tubes tied during the colder months between October and April—'a sterilization season'. The biomedical and state personnel implementing the population control programme—CHWs, CMHO bureaucrats, and MSI clinical staff—try to persuade women to disregard this conviction. Their biomedical explanations of healing, bodily structures, and technological intervention do not have much effect.

The second way that laparoscopic surgery is known in the village is *doorbeenwalla* operation. *Doorbeen* is a Hindi word for a telescope. The laparoscope and its ability to provide the doctor with an inside view of a human body through the lens on the top of the instrument becomes the *doorbeen* that many rural women find themselves gazed at through. *Doorbeenwalla* operation invokes the gaze as the central defining characteristic of the procedure and the medical system sanctioning it. It is not only the penetrating gaze of scientific medicine (Foucault 1963/1994) materialising in a laparoscope that the local term encapsulates. Gaze and vision in South Asia are powerful concepts outside of medical settings: *darshan* (sight of a divine), for instance, refers to a mutual looking, a transaction between

the devotee and the divine experienced at the moment of gazing (Taylor 2002; Bhatti and Pinney 2011). Vision is also ambiguous: it gains negative or positive meanings in different contexts. *Nazar*, an Arabic word for the gaze, illustrates this well: it can refer to an evil eye (*nazar lagaana*) and to the peak of emotional expression through holding the gaze between lovers (*nazar milaana*) (Taylor 2002). The laparoscope, too, is imagined as an ambiguously powerful technology, capable of harming and healing simultaneously.

Various forms of revelation are key to understanding the workings of medicine, illness, and healing (Macdonald 2015). The laparoscope is one such technique as it enables a practitioner—a surgeon—to reveal the inside workings of the body and to act upon it. Even though it is contained within a guarded setting—the OR—it circulates as a powerful public image of the process of revelation of inner inaccessible bodily truths. It distinguishes people capable of operating the laparoscope as technologically skilled and legitimises their assumed authority within and outside of the OR. To make sense of the laparoscope behind closed doors, people tap into their everyday experiences to find comparisons and explanations, thereby exemplifying that their relationships with biomedical technologies are increasingly constituted outside of clinical encounters (Biehl and Moran-Thomas 2009). Both *karant* and *doorbeen*—electricity and a telescope—invoke power to see and act inside the body as key defining characteristics of the laparoscope.

Besides containing power and ambivalence, the laparoscope does represent convenience for many women I met during fieldwork. Sterilization emerges not only as a form of pragmatic action (Brault et al. 2016; López 2008) or care (Lukšaitė 2022b), but also as something that makes women's lives easier. Women speak about challenges of feeding their children in the ever more precarious economy, difficulties in negotiating other contraceptive options with their partners, and the undesirability of reliance on CHWs. CHWs offer contraceptive pills and condoms but women find these temporary methods difficult to store, undesirable to consume on daily basis, and challenging to negotiate at every sexual encounter. In the context of reproductive chronicity that characterises rural women's lifeworlds (Lukšaitė 2022b), sterilization emerges as a convenient option for some women despite the ambivalence which envelopes the laparoscope.

## Conclusion

I investigated how politics, history, infrastructure, and gender dynamics affect how the laparoscope enters people's lives and what meanings it comes to possess (Haddon 2011). While the laparoscope is rarely conceptualised as a reproductive technology, doing so provides insights into complex relationships entangled in its workings: within households where the burden of contraception is placed on women because of the promise held by this technological intervention, between generations who have a different relationship with the historical trauma of forced vasectomies during the Emergency, and within biomedical and bureaucratic worlds at the sterilization camps.

Precisely because the laparoscope cannot be seen as women are under anaesthesia when they are subjected to its working, things in the everyday take on the explanatory power. While the biomedical understanding of a laparoscope as safe and sophisticated underpins the state's and some people's views of sterilization, such as Vijay's, other everyday concerns underpin other people's understanding of a technology that is known but unseen. The biomedical and state personnel's arguments emphasising the convenience of laparoscopic

sterilization—quicker surgery, shorter recovery times, no pain, no blood, and no weakness—align with the narrative in the opening vignette, where the blade and the blood during forced vasectomies were juxtaposed to a bloodless laparoscopic intervention in a voluntary capacity. Framing of sterilization in terms of convenience from the patient's perspective aligns it with the discourse of choice and masks the constraints within which choices are made (Nandagiri 2021). Narratives of convenience and choice—or convenient choices—are employed to further serve the needs of the population control programme and attempt to conceal—much the same as the laparoscope itself—the workings of power. Besides obscuring moral and political dimensions of sterilization, the framework of convenience constructs biomedical technologies as capable of existing without context or history. Local imaginaries of the laparoscope grounded in women's everyday lives, however, resist artificial binary juxtapositions of coercion/choice or harmful blade/harmless laparoscope. Women highlight the laparoscope's ambiguous power to see and act within their bodies but prioritise the pragmatism of everyday decision-making.

Local understandings of the laparoscope deepen our knowledge of the historically and institutionally constrained agentic possibilities engrained in India's population control programme. Extending the hierarchies perpetuated by biomedical institutions—between experts and the public or between the biomedical understandings of the body and bodies in contexts—the laparoscope plays a significant role in producing knowledge, norms, and aspirations that affirm relations of power ingrained in population control policies while hiding behind the discourse of choice and convenience. Investigating how a laparoscope is entangled in global exchanges, national policies, institutional arrangements, and local moral worlds demonstrates that biomedical discourses have the capacity to perpetuate structural inequalities by promoting the laparoscope as safe and convenient while disregarding the structural conditions within which reproductive decisions are made. In resource-poor healthcare systems which cannot be characterised by 'the political economy of hope' (Good 2007), women's focus on the laparoscope's power to harm and to heal simultaneously highlights local concerns which are often ignored by universalist frameworks of convenience. Investigating the discrepancy between biomedical and women's discourses contributes to a better understanding of how to provide safe, accessible, and affordable reproductive care worldwide.

## Note

1. Surgical abortion involves a surgical procedure to remove the pregnancy from the womb; medical abortion involves taking medicines (a combination of mifepristone and misoprostol) to end the pregnancy without the need for a surgery or anaesthesia.

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The author reports there are no competing interests to declare.

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